ABSTRACT

A polysilicon-emitter-type transistor has a substrate with a collector region, a base region on the collector region, and an oxide layer on the base region with an emitter window therein exposing part of the base region. The polysilicon emitter is formed by forming a first polysilicon layer of approximately 30 to 100 Angstroms at least within the emitter window and at least on the exposed base region. Then, an interfacial oxide layer being approximately 5 to 50 Angstroms thick is formed in an upper portion of the first polysilicon layer, for example, by exposing the first polysilicon layer to oxygen and annealing. Then, a second polysilicon layer is formed on the interfacial oxide layer. The thickness of the second polysilicon layer may be approximately 500 to 5000 Angstroms thick. Subsequent annealing diffuses dopants in the emitter more uniformly into the base region.